CS/INFO 4154: Analytics-driven Game Design

Class 36: Polishing

Some slides from: Kelvin Jin `16, TA (2015), worked on Thermo (2014), also Brian Curless (University of Washington)
Mon

11/19
Polishing

12/3
Kongregate Release

by 11:59pm:
Kongregate Report

Wed

11/26
Gamification

11/28
Games with a Purpose

by 11:59pm:
Final Peer Evaluations

Fri

11/30
Games for Learning

THANKSGIVING

12/10

12/12
Kongregate Release

- Needs 25 levels
- No other new requirements
- CMS deadline = Friday, 12/3 at 10:10am
- Must release by end of class Friday, 12/13
Kongregate

- Founded 2006
- Owned by:
  - Gamestop 2010-2017
  - Modern Times Group 2017-
- 120,930 games

Jim and Emily Greer
Kongregate Game Life Cycle

1-24 hours

Under Judgment
Kongregate Game Life Cycle

1-24 hours → Under Judgment

1 day → New Games List
Browse Games

MergeBabies
by drmop - Merge Babies is a fun arcade...
Nov. 18, 2018 ★ 0.0

Color Bars
by Algosoft - phisiq puzzle game
Nov. 18, 2018 ★ 0.0

Vikings
Try this super addicting strategy game
Play now

Aligner
by Furatto - A game where you need to...
Nov. 18, 2018 ★ 0.0

The Green Run
by CustomVoid - Infinite Runner; it ge...
Nov. 18, 2018 ★ 0.0

8 Ball Pool
by Draco026 - Enjoy :) --
Nov. 18, 2018 ★ 0.0
Kongregate Game Life Cycle

1-24 hours
Under Judgment

1 day
New Games List

1-7 days
Frontpage

Gathering Dust
Kongregate Game Life Cycle

1-24 hours: Under Judgment

1 day: New Games List

1-7 days: Frontpage

1 month: Best of Month

Gathering Dust
2017

TOP GAMES THIS MONTH

- **Duelyst**
  - Multiplayer
  - CCG
  - Tactical
  - ★ 4.1
  - by BNEA

- **Heart of Galaxy: Horizons**
  - Space
  - Strategy
  - Idle
  - ★ 3.6
  - by Cheslava

- **Kirigami**
  - Student Developed
  - Platform
  - ★ 3.5
  - by dml339

- **Outfoxed!**
  - Puzzle
  - 5 Minute
  - Animal
  - ★ 3.4
  - by aliu139

(see all)
Kongregate Monthly Contest

OCTOBER 2017 CONTEST WINNERS

Each month, developers win cash prizes for having the highest-rated new games! Click here for official rules.

Aground
by terra0nova

One of the last human survivors, you find yourself stranded on an u...

⭐⭐⭐⭐⭐

Contest Prize: $1,750
Kongregate Monthly Contest

- Prizes for top 15 games of month
- Range from $250 to $1750
- Some conditions:
  - must implement Kongregate Statistics API
### NOVEMBER 2017 CONTEST WINNERS

Each month, developers win cash prizes for having the highest-rated new game. Read here for official rules.

<table>
<thead>
<tr>
<th>Rank</th>
<th>Game Title</th>
<th>Developer</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Wondrous Lands</td>
<td>drakonian_lord</td>
<td>★★★★☆</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Contest Prize: $1,750</td>
</tr>
<tr>
<td>2</td>
<td>Shift</td>
<td>GJ Games</td>
<td>★★★★☆</td>
</tr>
<tr>
<td>3</td>
<td>Realm Revolutions</td>
<td>a_cha</td>
<td>★★★★☆</td>
</tr>
<tr>
<td>4</td>
<td>Hat Wizard</td>
<td>thecommandeur</td>
<td>★★★★☆</td>
</tr>
<tr>
<td>5</td>
<td>Heart of Galaxy: Horizons</td>
<td>Cheaters</td>
<td>★★★★☆</td>
</tr>
</tbody>
</table>

**FIRST RUNNERS-UP:** $400

<table>
<thead>
<tr>
<th>Rank</th>
<th>Game Title</th>
<th>Developer</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>Revenge of The Kid</td>
<td></td>
<td>★★★★☆</td>
</tr>
<tr>
<td>7</td>
<td>Outfoxed!</td>
<td>alias130</td>
<td>★★★★☆</td>
</tr>
<tr>
<td>8</td>
<td>Decubed</td>
<td>say892</td>
<td>★★★★☆</td>
</tr>
<tr>
<td>9</td>
<td>Karta Quest: Chapter 1</td>
<td>Meczan</td>
<td>★★★★☆</td>
</tr>
<tr>
<td>10</td>
<td>GetStar</td>
<td>truefire</td>
<td>★★★★☆</td>
</tr>
</tbody>
</table>

**SECOND RUNNERS-UP:** $250

<table>
<thead>
<tr>
<th>Rank</th>
<th>Game Title</th>
<th>Developer</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>Attack of The Mutant Cyclopes</td>
<td>tapark</td>
<td>★★★★☆</td>
</tr>
<tr>
<td>12</td>
<td>Forgotten Dungeon</td>
<td>koreik</td>
<td>★★★★☆</td>
</tr>
<tr>
<td>13</td>
<td>Loot Collector Beta</td>
<td>arrpen</td>
<td>★★★★☆</td>
</tr>
<tr>
<td>14</td>
<td>Retro Combo</td>
<td>Oscurelaza</td>
<td>★★★★☆</td>
</tr>
<tr>
<td>15</td>
<td>Coven</td>
<td>cablenmann202</td>
<td>★★★★☆</td>
</tr>
</tbody>
</table>
DECEMBER 2017 CONTEST WINNERS

World's End Chapter 3
by MezzaninesStairs

The darkly comedic strategy RPG continues. Will Tegovran and Company...

First Runners-Up: $400

6. Idle Intelligence
by SkyboxWorkshop

7. Khigami
by denis33a

8. The Zombie Food Truck
by team_tztf

Second Runners-Up: $250

11. Max color Idle
by Myakisha

12. Direkt
by SpaghettiGames

13. Konnectore
by CitizenDown

14. Moczan's Lootbox Game
by Mozcan

15. Cows vs Vikings: Tower Defence
by redonxas
Kongregate Game Life Cycle

1-24 hours: Under Judgment
1 day: New Games List
1-7 days: Frontpage
1 month: Best of Month

Gathering Dust
What is game polish?

- Hard to define objectively
What is game polish?

"Polish is often adding things nobody will ever notice, comment on, or appreciate, but will notice, comment on and appreciate when they aren't there."

- Frank Kowalkowski, Alpha Protocol
What is game polish?

“Polish, to me, is the last 10 to 20 percent of effort where everything in the game is now working and you take the time to focus on the little details that have a big impact on the overall quality of the game. [...] Polish is extremely important, as it has the ability to take a good game and make it great."

- Rod Fergusson, Gears of War 2
Polish is small details that:

- Are added intentionally
- Have minimal impact on the core mechanics
- Enhance the gameplay experience
- Are story, animations, sound effects, visual effects
Why is polish important?

- Makes games seem more fun than they really are
- Adds cohesiveness to the theme of your game
- Presentation can make a big difference
Importance of Presentation

Infiniminer

Minecraft
Importance of Presentation

Crush the Castle

Angry Birds
Twelve Basic Principles of Animation

Developed by Disney’s Ollie Johnston & Frank Thomas:

1. Squash and Stretch
2. Anticipation
3. Staging
4. Straight Ahead Action and Pose-to-Pose
5. Follow Through and Overlapping Action
6. Slow In and Slow Out
7. Arc
8. Secondary Action
9. Timing
10. Exaggeration
11. Solid Drawing
12. Appeal
Twelve Basic Principles of Animation

Developed by Disney’s Ollie Johnston & Frank Thomas:

1. Squash and Stretch
2. Anticipation
3. Staging
4. Straight Ahead Action and Pose-to-Pose
5. Follow Through and Overlapping Action
6. Slow In and Slow Out
7. Arc
8. Secondary Action
9. Timing
10. Exaggeration
11. Solid Drawing
12. Appeal
1. Squash and Stretch

- **Squash**: flatten an object or character by pressure or by its own power.
- **Stretch**: used to increase the sense of speed and emphasize the squash by contrast.
- **Note**: keep volume constant!
Twelve Basic Principles of Animation

Developed by Disney’s Ollie Johnston & Frank Thomas:

1. Squash and Stretch
2. **Anticipation**
3. Staging
4. Straight Ahead Action and Pose-to-Pose
5. Follow Through and Overlapping Action
6. Slow In and Slow Out
7. Arc
8. Secondary Action
9. Timing
10. Exaggeration
11. Solid Drawing
12. Appeal
2. Anticipation

- An action has three parts: anticipation, action, reaction.
- Anatomical motivation: a muscle must extend before it can contract.
- Prepares audience for action so they know what to expect.
- Directs audience's attention.

Which is heavier?
Twelve Basic Principles of Animation

Developed by Disney’s Ollie Johnston & Frank Thomas:

1. Squash and Stretch
2. Anticipation
3. Staging
4. Straight Ahead Action and Pose-to-Pose
5. Follow Through and Overlapping Action
6. Slow In and Slow Out
7. Arc
8. Secondary Action
9. Timing
10. Exaggeration
11. Solid Drawing
12. Appeal
3. Staging

- Present the idea so it is unmistakably clear.
- Audience can only see one thing at a time.
- Useful guide: stage actions in silhouette.

Which action is clearer?
Twelve Basic Principles of Animation

Developed by Disney’s Ollie Johnston & Frank Thomas:
1. Squash and Stretch
2. Anticipation
3. Staging
4. Straight Ahead Action and Pose-to-Pose
5. Follow Through and Overlapping Action
6. Slow In and Slow Out
7. Arc
8. Secondary Action
9. Timing
10. Exaggeration
11. Solid Drawing
12. Appeal
5. Follow Through and Overlapping Action

- Actions seldom come to an abrupt stop.
- Physical motivation: inertia
Twelve Basic Principles of Animation

Developed by Disney’s Ollie Johnston & Frank Thomas:

1. Squash and Stretch
2. Anticipation
3. Staging
4. Straight Ahead Action and Pose-to-Pose
5. Follow Through and Overlapping Action
6. Slow In and Slow Out
7. Arc
8. Secondary Action
9. Timing
10. Exaggeration
11. Solid Drawing
12. Appeal
6. Slow In and Slow Out, 9. Timing

- Technique: **Easing**
- Replace linear interpolation with more interesting movement patterns
- Makes movement feel more natural/stylized
- [http://sol.gfxile.net/interpolation/](http://sol.gfxile.net/interpolation/)

From easings.net
Easing in *Thermo*
Thermo Demo

Thermo

Press ENTER
Twelve Basic Principles of Animation

Developed by Disney’s Ollie Johnston & Frank Thomas:

1. Squash and Stretch  
2. Anticipation  
3. Staging  
4. Straight Ahead Action and Pose-to-Pose  
5. Follow Through and Overlapping Action  
6. Slow In and Slow Out  
7. Arc  
8. Secondary Action  
9. Timing  
10. **Exaggeration**  
11. Solid Drawing  
12. Appeal
10. Exaggeration

- Bring out characteristics about your character or your world by exaggerating them
Exaggeration
Exaggeration
Activity: Polish

- Play *Star Husky*
- How does this game make you feel?
- Identify five things you would consider “polish”
  - intentionally placed in the game to make it “feel” better, but minimal impact on core gameplay
- What can you learn for your own games?
Activity: Polish

• Play *Monster Sanctuary*

• How does this game make you *feel*?

• Identify five things you would consider “polish”
  • intentionally placed in the game to make it “feel” better, but minimal impact on core gameplay

• What can you learn for your own games?